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# Mn/DOT's Innovative Contracting Program Best Practices

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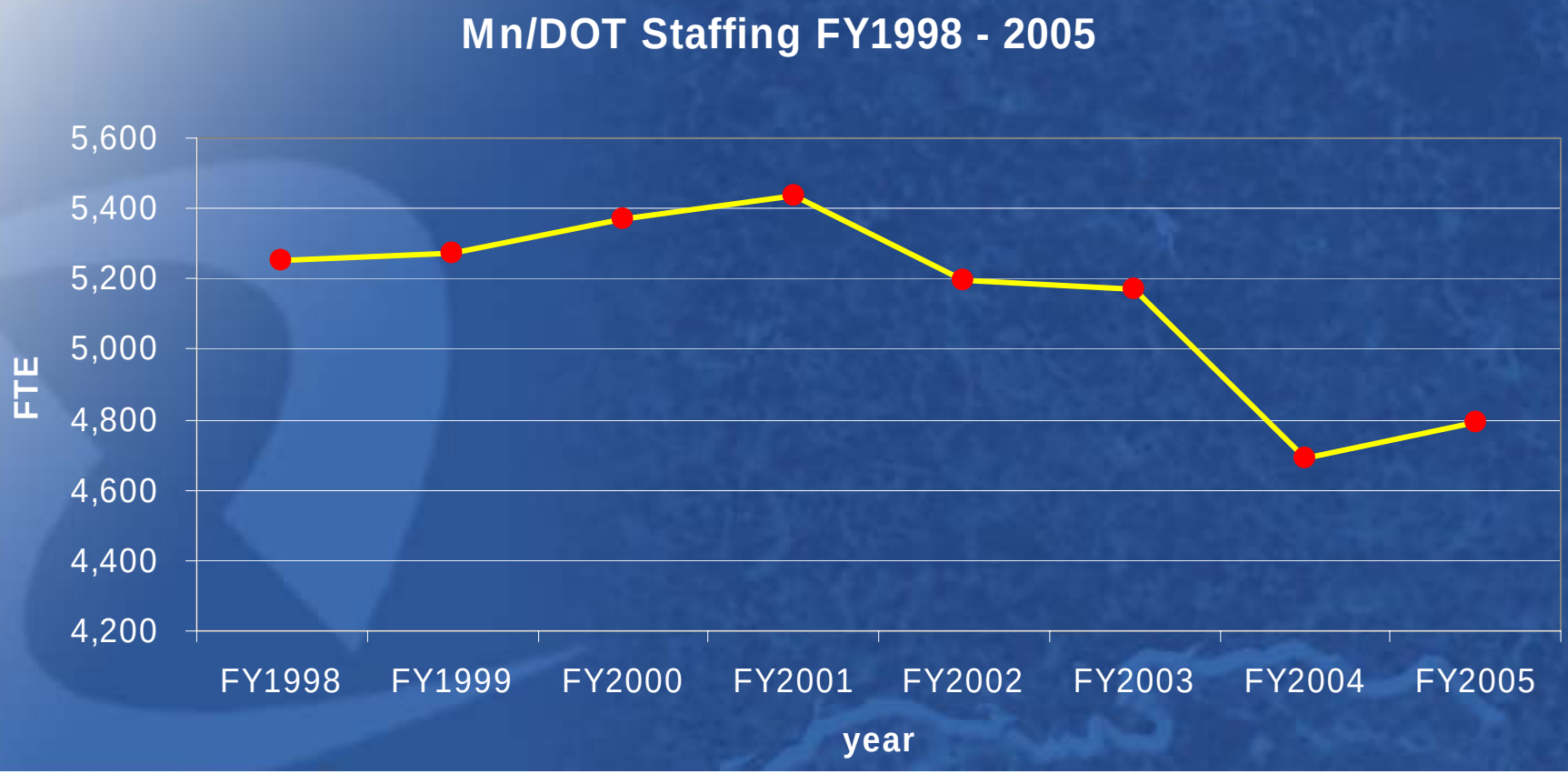
# Employment has declined by nearly 600 or 15% since 2001



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# Statewide, 3 to 1 favor spending more on construction scheduling in order to get work done quicker.

**More than 7 in ten respondents would favor spending added construction money to finish jobs quicker.**

| Scheduling Preference | Statewide | | TC Metro | | Greater MN | |
|---|---|---|---|---|---|---|
| | % | n | % | n | % | n |
| Lower cost – longer duration | 24% | 191 | 14% | 56 | 34% | 136 |
| Higher cost – shorter duration | 74% | 591 | 84% | 334 | 64% | 256 |
| Don't know | 2% | 18 | 2% | 10 | 2% | 8 |
| *Base* | | *800* | | *400* | | *400* |

Metro area customers are more likely to favor expedited projects and higher spending

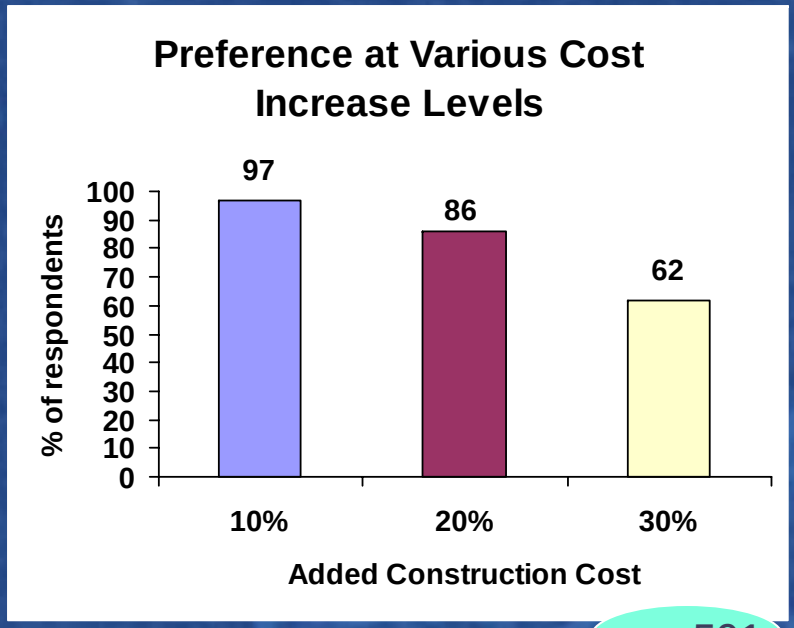
# Neither fewer projects nor increase in costs changes preference for speedy completion.

*If the shorter duration of roadwork and the increased cost meant that Mn/DOT would need to do fewer construction projects each year, would you still prefer that scenario?*

| Still Prefer | Statewide | | TC Metro | | Greater MN | |
|---|---|---|---|---|---|---|
| | % | n | % | n | % | n |
| Yes | 81% | 477 | 85% | 283 | 76% | 194 |
| No | 19% | 113 | 15% | 51 | 24% | 62 |
| *Base* | | *591* | | *334* | | *256* |

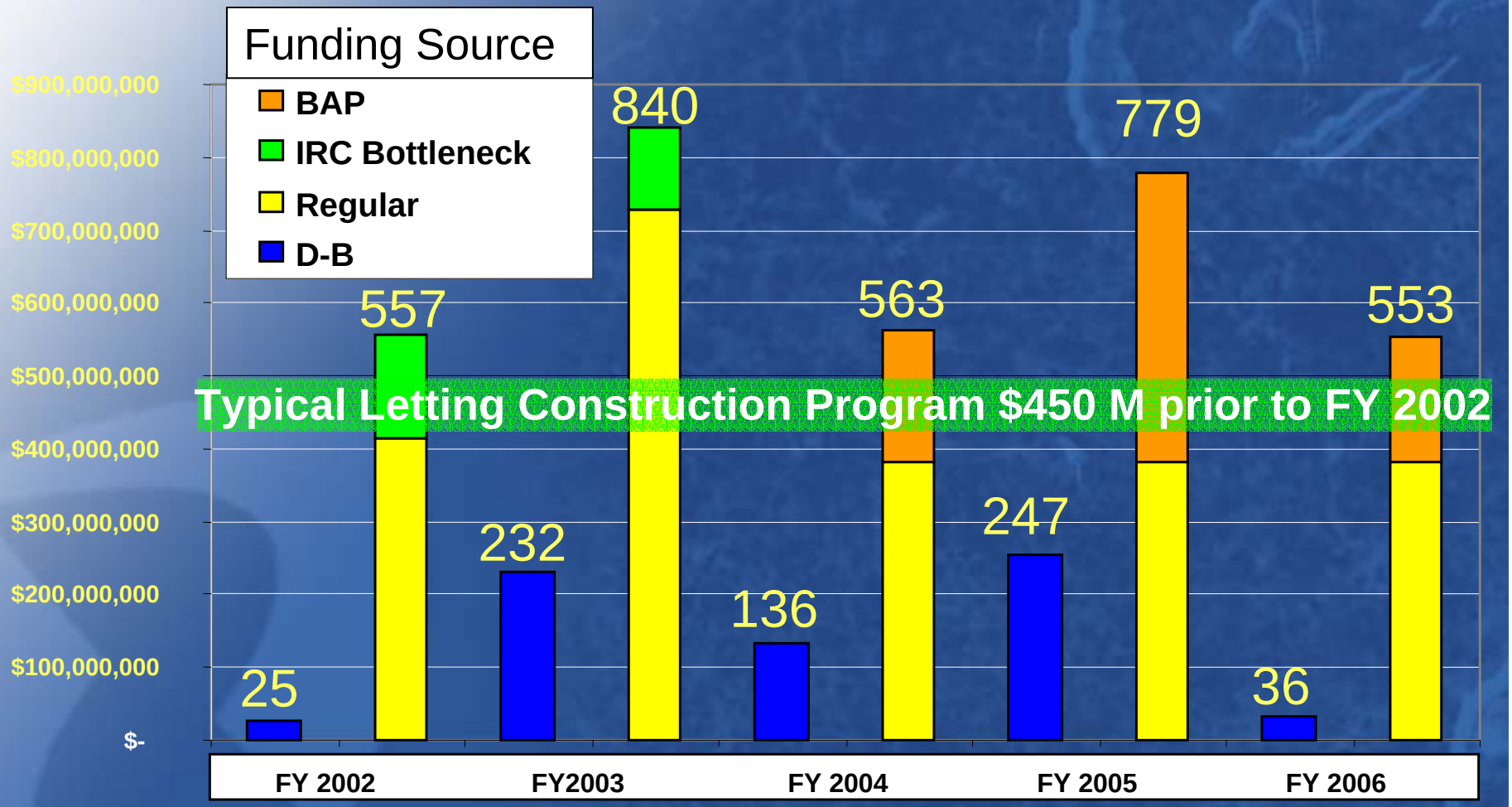
Metro area more likely to agree.

*If this shorter duration were to cost x% more than standard construction projects cost, would you still prefer it?*




n = 591

# Construction Program




*The Construction Program is only project letting dollars.

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# Mn/DOT's D-B Projects

Four projects under construction

- ✓ ROC 52 - $232M
- ✓ I-494 - $135M
- ✓ TH 10/32 - $8.6M
- ✓ TH 212 -$238M

One project under development

- ✓ TH 52 Oronoco - $36M

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# Design-Build

- A project delivery method that overlaps the design and construction phases
- Phases are concurrent, rather than sequential like traditional Design-Bid-Build method
- New project and quality management approach
- New roles and responsibilities for Mn/DOT and Contractors

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# When do we use D-B?

- Projects with complex designs, staging, and traffic control
- Project acceleration
- Larger projects taking more than one year to complete
- Packaged projects (several smaller combined into one larger project)
- Projects where innovation can be incorporated

# Design-Bid-Build

## Advantages

- Long history of acceptance
- Open competition
- Distinct roles are clear
- Easy to bid

Adapted from *Better Roads*
December 2002

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# Design-Bid-Build

## Disadvantages

- Innovation not optimized
- Cost overruns
- Disputes between parties
- Owner retains most risks
- Usually low bid; incentive for change orders
- Owner responsible for errors and omissions
- Linear project delivery process

Adapted from *Better Roads*
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# Design-Build Advantages

- Shorter delivery time
- Reduce user costs
- Innovation by contractor and designer
- Allows flexibility in design
- Innovative material selection and construction methods
- Best value
  - Contractor selection process based on technical and financial proposal evaluation

Adapted from *Better Roads*
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# Design-Build

## Disadvantages

- New method; unfamiliar process
- Owner needs to make quicker decisions
- Not a perfect tool; Not for every job
- Bid process can be more expensive

Adapted from *Better Roads*
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# Best Practices

- Integration of technology – Design-Build Contract Administration System
- ISO 9001 Quality Management Approach
- Co-housing of project staff
- Proactive partnering
- CPM scheduling

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# Quality Management Challenges

- ISO 9001 is a new approach for most Contractors and Designers
- New approach for Mn/DOT
- Moving the responsibility for quality to the lowest levels
- Implementing quality management with subcontractors
- People change on each job

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# Co-Housing of Project Staff

- Design, Construction, Administration, and Quality Staff all under one roof
- Fosters relationships
- Over-the-shoulder reviews increase design development efficiency
- Promotes quicker problem solving

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# Proactive Partnering

- Project team goal establishment
- Monthly evaluations by most project staff to measure key areas
- Quarterly Executive Partnering meetings
- Quarterly partnering meetings attended by most staff

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# CPM Scheduling

- Establishes contractors plan for construction and includes all contract requirements
- Cost and resource (man-power, equipment, materials) loaded
- Owner can predict resources needed
- Accurate prediction of scheduled completion date
- Tool to manage the project, including delay mitigation
- As-built record of construction activities

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# Claims Avoidance

- Do our Homework
  - Know the plans and specifications
  - Know the procedure
- Be Pro-active
  - Know where the contractor will be working
  - Know what the contractor will be working on
  - Look for and anticipate problems
  - Document, Document, Document

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# Contractor Claims

- Changes in Scope
- Delay
- Acceleration
- Disruption